

**Remarks**

Claims 15-37 are currently pending in the Application.

**Claims 15-37**

This response amends Claims 15, 20, 24 and 32 to further recite a print head scans in “a predetermined direction” and that the random distances between centers of consecutive dot images are also in “the predetermined direction.”

**35 U.S.C. §103(a) Rejection in view of Yano (U.S. Patent No. 5,914,731) and further in view of Logan (U.S. Patent No. 4,575,730)**

Claims 15-16, 18-21, 23-26, 28-34 and 36-37 stand rejected under 35 U.S.C. §103(a) as being obvious in view of Yano and further in view of Logan.

Applicants submit that the Examiner has **not** established a *prima facie* case of obviousness for the claims rejected under 35 U.S.C. §103(a). Applicants note:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure" (emphases added) *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants submit that a *prima facie* case of obviousness has not been established, at least, because Yano and Logan do not teach each and every element as claimed in the present application.

Claim 15

Applicants submit that Yano and Logan do not disclose, suggest or teach, *inter alia*, at least the following features recited by amended Claim 15 of the present application:

“a print head for scanning over a printing medium **in a predetermined direction** ... wherein each set of driving timing sequences sequentially drives the M printing elements to provide random distances **in the predetermined direction** between centers of consecutive dot images formed by the printing element set of the printing head” (emphasis added)

The Examiner concedes that Yano does not disclose wherein the random distances is a distance between centers of consecutive dot images. The Examiner asserts that the limitation of “provide random distances ... between centers of consecutive dot images” as recited in Claim 15 is disclosed by Logan. See page 3, second and third full paragraph of the Official Action.

According to Logan, ink drops are placed random distance from each other vertically while the print head moves horizontally along the page. See column 4, lines 38-40 and Figures 5b, 5c of Logan. Contrary to Logan, amended Claim 15 recites that dot images are placed random distance from each other in the same direction as the movement of the print head. Clearly the Logan reference that teaches placing ink drops at random in vertical direction while moving the print head in a horizontal direction does not teach disclose or suggest “a print head for scanning over a printing medium in a predetermined direction ... wherein each set of driving timing sequences sequentially drives the M printing elements to provide random distances in the predetermined direction between centers of consecutive dot images formed by the printing element set of the printing head” as recited in amended Claim 15.

Hence, Claim 15 is patentable over Logan and should be allowed by the Examiner. Claims 16-20, at least based on their dependency on Claim 15, are also believed to be patentable over Logan.

Claim 20

Applicants submit that, at least for the reasons stated above, cited references do not teach, disclose or suggest “a print head to scan over said printing medium in a predetermined direction ... wherein distances between centers of consecutive dot images formed by the printing element set of the printing head are random in the predetermined direction” as recited in amended Claim 20. Hence, Claim 20 is patentable over the cited references and should be allowed by the Examiner. Claims 21-23, at least based on their dependency on Claim 20, are also believed to be patentable over the cited references.

Claim 24

Applicants submit that, at least for the reasons stated above, cited references do not teach, disclose or suggest “a print head for scanning over a printing medium in a predetermined direction ... a cyclic unevenness of said image is scattered and random distances in the predetermined direction” as recited in amended Claim 24. Hence, Claim 24 is patentable over the cited references and should be allowed by the Examiner. Claims 25-31, at least based on their dependency on Claim 24, are also believed to be patentable over the cited references.

Claim 32

Applicants submit that, at least for the reasons stated above, cited references do not teach, disclose or suggest “a printing medium using a print head to scan over said printing medium in a predetermined direction ... wherein distances between centers of consecutive dot images formed by the at least one printing element of the printing head are random in the predetermined direction” as recited in amended Claim 32. Hence, Claim 32 is patentable over the cited references and should be allowed by the Examiner. Claims 33-37, at least based on their dependency on Claim 32, are also believed to be patentable over the cited references.

**35 U.S.C. §103(a) Rejection in view of Yano, Logan and further in view of Iwasaki**  
**(U.S. Patent No. 6,142,598)**

Claims 17, 22, 27 and 35 stand rejected under 35 U.S.C. §103(a) as being obvious in view of Yano, Logan and further in view of Iwasaki.

Applicants submit that Claims 17, 22, 27 and 35, at least based on their dependency on Claims 15, 20, 24 and 32, respectively, are believed to be patentable over Yano, Logan and Iwasaki, because there is no prima facie 35 USC 103(a) case based on Yano and Logan, as shown above, and because the Examiner has not shown to the Applicants where Iwasaki discloses, teaches or suggests the features not found in Yano and Logan.

**Conclusion**

In view of the above, reconsideration and allowance of all the claims are respectfully solicited.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents POB 1450, Alexandria, VA 22313-1450 on

July 20, 2005

(Date of Deposit)

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